UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 13, 2009

Mr. William H. Hopkins, Plant Manager
E.I duPont de Nemours and Company
Washington Works
P.O. Box 1217
Washington, WV 26181-1217

Re: Information Request; C-8 waste disposal sites, Washington Works Facility

Dear Mr. Hopkins:

Since 2001, the U.S. Environmental Protection Agency (EPA) and E.I. DuPont de Nemours and Company (DuPont) have been working to identify and characterize disposal sites for ammonium perfluorooctanoate (C-8) wastes that were generated at the DuPont Washington Works, West Virginia facility. . Under an Order on Consent between EPA and DuPont (issued initially in 2002, with superseding orders in 2006 and 2009), pursuant to the Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.* (SDWA), DuPont has conducted comprehensive monitoring of the ground water and surface water in the vicinity of these disposal and deposition sites. EPA has determined that numerous public and private drinking water supplies in West Virginia and Ohio contained C-8 at or above the preliminary health advisory level. DuPont has subsequently provided or offered alternate water, including appropriate treatment, to the users of these systems.

EPA Regions III and V recently learned that there may be additional C-8 waste disposal sites in their states. Specifically, in the enclosed letter from Robert Ritchey (DuPont) to Cliff Whyte (West Virginia Department of Environmental Protection) (July 12, 2006), DuPont identified several C-8 disposal sites in Ohio, West Virginia, Virginia and Alabama. It has not been established whether each of these sites has been fully evaluated for their respective risk to adversely impact nearby drinking water supplies.

Accordingly, pursuant to Section 308(a) of the Clean Water Act, 33 U.S.C. § 1318(a), EPA is requesting information to determine whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance. Further, pursuant to Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9604(e), EPA has a reasonable basis to believe there may be a release or threat of release of a hazardous substance or pollutant or contaminant.

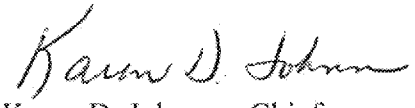
EPA requests that DuPont provide us with the following information for each of the listed sites contained in Attachment A:

(1) Provide the disposal site location, quantity and concentration of any C-8 waste disposed, time frame of disposal, shipping documents (e.g., manifests) and ground water monitoring data related to such disposal taken by DuPont or any third party directed by DuPont. This request includes, but is not limited to, any biosludge from a DuPont facility that has been land-farmed.

(2) Update the July 12, 2006 letter to identify any additional C-8 disposal/deposition sites not disclosed in that letter.

EPA will review the submitted data and determine whether further investigation is warranted. Additional work may include, but not be limited to, a requirement that DuPont develop and submit a work plan to conduct the necessary investigation and/or monitoring to determine if any nearby drinking water supplies are impacted. Please provide your response to me by September 30, 2009. EPA Region III has agreed to coordinate and distribute applicable information to the other relevant EPA Regions. Thank you for your consideration in this important matter. If you have any questions, please contact Roger Reinhart of my staff at 215-814-5462.

Sincerely,



Karen D. Johnson, Chief
Ground Water & Enforcement Branch

Cc: Andrew Hartten, DuPont
Thomas Poy, EPA Region V
William Bush, EPA Region IV
Gail Mitchell, EPA Region IV
Benjamin Bahk, EPA HQs

Enclosure

ATTACHMENT A

DuPont C-8 Disposal Sites

State	Disposal Site
West Virginia	Three B Disposal Company Landfill
West Virginia	Waste Management's Meadowfill Landfill
West Virginia	Waste Management's Northwest Landfill, Parkersburg
Virginia	Waynesboro Nurseries, Waynesboro
Ohio	Beach Hollow Landfill, Wellston
Ohio	BFI, East Palestine
Ohio	Brightenstein, (near Marion)
Ohio	Clermont Environmental Reclamation, Williamsburg
Ohio	Ny-Trex, Loudonville
Ohio	Waste Management's Suburban Landfill, Glenford
Alabama	Chemical Waste Management Landfill, Emelle

E. I. du Pont de Nemours & Company
Washington Works
Mail: P.O. Box 1217
Washington, WV 26181-1217

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 12, 2006

Mr. Cliff D. Whyte, P. E.
Assistant Director
WV Dept. of Environmental Protection
Div. of Water and Waste Management
601 57th Street, SE
Charleston, WV 25304-2345

Re: Letter, Cliff D. Whyte to R. L. Ritchey, December 16, 2005
Letter, Robert L. Ritchey to Cliff D. Whyte, January 12, 2006

Dear Mr. Whyte:

This letter responds to your letter of December 16, 2005 requesting documentation detailing the historical disposal of materials that may contain C-8. (This response and report uses the term "C-8" to refer to ammonium perfluorooctanoate, which is also referred to elsewhere as APFO, PFOA, and FC-143.)

This submission is being made voluntarily. By filing this response, DuPont is not admitting to the jurisdiction or conceding the authority of the WVDEP with respect to the information requested.

The attached report is the result of a good faith effort by DuPont to identify records that may be responsive to your request and to provide reasonable estimates and calculations, while at the same time attempting to avoid speculation. Please be advised, however, that because of the limited availability of historical records and of persons knowledgeable of historical disposal practices, and despite diligent efforts to locate and provide information responsive to the request, the report should not be construed as a comprehensive, definitive document on historical disposal practices at the site. Locating additional responsive information to result in a more comprehensive document is not a matter of more time or effort. Many records are simply believed to no longer exist. It should also be noted that the reliability of the information provided generally declines the further back in time it goes because of the lack of confirmatory resources and records.

E. I. du Pont de Nemours & Company, Inc.
Shipping: 8480 DuPont Rd
Washington, WV 26181

As per previous discussions with you, the attached report is organized by disposal location and chronology to enhance understanding and usefulness. Please contact me if you have any questions regarding the information provided.

Sincerely,

Robert L. Ritchey
Senior Environmental Control Consultant
DuPont Washington Works

Attachment

HISTORICAL DISPOSAL OF MATERIALS CONTAINING C-8
In Response to WVDEP Letter of December 16, 2005

This report summarizes information gathered from an investigation performed from January 2006 to July 2006 in response to a request from the WVDEP for documentation detailing the historical disposal of materials that may contain C-8, specifically the nature and quantity of material landfilled. The information in the report was compiled from a records review at the Washington Works plant site, interviews with present and past Washington Works employees and employees at other DuPont sites, research in Wood County, and first-hand knowledge of the principal investigator, a former Washington Works employee familiar with fluoropolymer waste-management activities.

Available records reviewed indicate that the Washington Works site began using C-8 in 1951. During the period from 1951 through 1964, solid waste from manufacturing operations [1] are assumed to have been disposed of at the Riverbank Landfill located within and along the northern boundary of Washington Works. No records could be located documenting the amount of waste disposed; however, it is estimated from polymer production records and material balance calculations that a total of approximately 2000 pounds of C-8 would have been contained in materials disposed of at the Riverbank Landfill during this fourteen year period. In addition, unknown minor amounts of waste containing C-8 would have been sent to the Riverbank Landfill from research operations, and, beginning in 1964, an insignificant amount of research waste containing C-8 would have been sent to the Local Landfill located within the southern perimeter of Washington Works.

As best as could be reconstructed, the primary waste disposal location for polymer waste, and possibly dryer paper, for a period of a couple years in the 1960's was the Three B Disposal Company landfill located off old State Route 2 in Parkersburg, WV. Records indicate that a total of approximately one million pounds of polymer production-related waste were disposed at Three B over these two years. The total amount of C-8 contained in those wastes is estimated from material balance calculations at 450 pounds. In addition, minor amounts of waste from the research area would have been disposed of at the Local Landfill, as presumably would have minor amounts of polymer and other miscellaneous manufacturing-related waste other than dryer paper.

This study found no records of landfill disposal from 1966 to the beginning of 1968.

The Letart Landfill, located just north of the town of Letart in Mason County, WV, became the primary disposal location for production-related waste containing C-8 [1] beginning in 1968. Production records and material balance calculations indicate that from 1968 through 1983, a total of approximately 7,900 pounds of C-8 would have been

(1) Polymer, dryer paper, material drums, product samples, in-process materials, waste wax, filter cartridges, floor sweepings, equipment and piping, etc.

present in production-related waste disposed of at the Letart Landfill. While Letart Landfill would have continued to be the primary disposal site from 1984 through 1986, no production records could be located for those years to allow calculating the amount of C-8 contained in waste disposed of during those three years. Production record availability resumes in 1987, and from then through 1995 it is calculated that over this nine year period a total of approximately 13,500 pounds of C-8 were contained in production-related waste disposed of at the Letart Landfill. Unknown minor amounts of research area waste containing C-8 would also have gone to the Letart Landfill during the 1968-1995 period.

Beginning in 1996 and continuing through 2002, the Chemical Waste Management landfill in Emelle, AL, was the primary location for disposal of production-related waste containing C-8. [1] It is estimated from material balance calculations that the total amount of C-8 contained in waste disposed of at Emelle over the seven-year period of 1996-2002 period was 18,300 pounds.

With the closure of the Letart Landfill, beginning in 1996 process-related waste containing very low levels of C-8 [2] were sent to the DuPont-owned Dry Run Landfill, located west of the town of Lubeck in Wood County, WV. These materials are estimated to have contained less than 1 pound of C-8 in total per year. Dry Run Landfill was closed to receipt of wastes on March 31, 2006. In addition, records reviewed indicate several specific disposal events of non-production-related material occurred at this landfill. In 1988, Dry Run landfill received 7,100 tons of soil from the closing of anaerobic digestion ponds at the Washington Works plant site. Based on samples of this material at the time of disposal, it is estimated that it contained 4,500 pounds of C-8. In 1994 and 1995, solids from the Washington Works biopond were disposed at the Dry Run Landfill. It is estimated that this material contained about 5 pounds of C-8 each of the two years. No records were found documenting any other non-production-related waste containing C-8 being disposed of at Dry Run Landfill, although insignificant amounts may have been present on other waste through routes such as atmospheric deposition.

This investigation also explored incidental land disposal of waste containing C-8 at locations both on and off the Washington Works property. In this regard, the following items were determined:

- In 1996 approximately 139 tons of bio-sludge from the Washington Works wastewater treatment plant were land-farmed at the site's East Field. It is estimated that the amount of C-8 in this sludge was less than one pound.

- Washington Works sanitary treatment plant sludge was land-farmed at the on-site experimental chestnut tree plantation, a project of the plant employees' Wildlife Habitat Committee, in 1995 and 1996. No records could be found that would allow calculating how much C-8 would have been present in this material, but it is believed to be minor.

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(2) Dry scrap product and dry customer returns from Washington Works and from the affiliated Little Hocking, OH, contracted operations, etc.

- Waste Management's Northwest Landfill in Parkersburg, WV was the disposal location for several incidental C-8 containing wastes. These include:
  - filter media associated with treating groundwater used for process water at Washington Works (two disposal events since the year 2000)
  - Washington Works wastewater treatment plant bio-sludge disposal (1996-present)
  - calcium fluoride filter cake disposal (2000-2004)
  - soil from the rework of Washington Works railroad beds (2003-present)

  The total aggregate amount of C-8 contained in these wastes is estimated at 4 to 6 pounds per year based on records available for 1999-present.

- Soil from near the Washington Works river pump house was disposed of at Waste Management's Suburban Landfill in Glen Ford, OH, in 2004. C-8 contained in this soil is calculated at less than 0.1 pounds.

- Washington Works soils disposed of at Chemical Waste Management's landfill in Sulphur, LA, in 2005 contained less than 0.002 pounds of C-8.

Other miscellaneous non-DuPont landfilling/land-farming of waste containing C-8 that was identified in this investigation, but for which records could not be located to allow estimating the amount of C-8 involved, include:

- Beech Hollow Landfill, Wellston, OH – filter cake from process water treatment (2000-present)
- BFI, East Palestine, OH – landfilling and land-farming of bio-sludge and supernate (1976-1978)
- Brightenstein, near Marion, OH – land-farming of bio-sludge (1983)
- Clermont Environmental Reclamation, Williamsburg, OH – landfilling and land-farming of bio-sludge (1977-1981)
- Ny-Trex, Loudonville, OH – land-farming of bio-sludge and supernate (1979-1980)
- Waynesboro Nurseries, Waynesboro, VA – land-farming of bio-sludge (1979-1981)

The scope of this investigation also included C-8 containing wastes either generated in West Virginia or disposed of in West Virginia from other DuPont sites. To address this portion of the scope, DuPont sites in or within 150 miles of West Virginia were surveyed as to their history of generating and disposing of wastes containing C-8. DuPont plans to continue to investigate past or current plant sites east of the Mississippi River and beyond the 150 miles range already investigated, however completion of that effort is not expected for another month. Sites identified to-date as generating or landfilling in West Virginia waste containing C-8 include:

- Fairmont, WV – plastics containing fluoropolymer with negligible amounts of C-8 were landfilled at Waste Management's Meadowfill Landfill in Clarksburg, WV (1990-present)
- Ravenswood, WV – plastics were returned to Washington Works and would be included in the Washington Works waste disposal practices as presented elsewhere in this summary
- Little Hocking, OH – plastics sent to Dry Run Landfill and included in Washington Works waste disposal practices as presented elsewhere in this summary

Consistent with the WVDEP's request, the scope of this investigation did not include determining where non-DuPont entities, such as customers, transporters, reclaimers, testing facilities, compounders, incinerators or treatment units, laboratories, and the like, would have disposed of waste they may have generated.